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(FILE 'HOME' ENTERED AT 09:47:37 ON 13 FEB 2002)

FILE 'EUROPATFULL, PCTFULL, USPATFULL, USPAT2, CAPLUS, CAOLD' ENTERED AT  
09:47:55 ON 13 FEB 2002

L1           923 S ((HYDROGEN (A) FLUORIDE) OR HF) (P) AH  
L2           638 S L1 AND (PERFLUOR? OR FLUOR?)  
L3           389 S L2 AND (CURRENT OR VOLTAGE OR POTENTIAL)

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L1: Entry 1 of 1

File: DWPI

Dec 14, 1978

DERWENT-ACC-NO: 1978-91565A

DERWENT-WEEK: 197851

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TITLE: Per:fluoroalkane-sulphonyl fluoride prepn. - by electrolysis of alkane-sulphonyl halide or sulphone in hydrogen fluoride

INVENTOR: WECHSBERG, M

## PATENT-ASSIGNEE:

ASSIGNEE	CODE
BAYER AG	FARB

PRIORITY-DATA: 1977DE-2725211 (June 3, 1977)

## PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
DE 2725211 A	December 14, 1978		000	
DE 2725211 C	September 17, 1981		000	

INT-CL (IPC): C07C 143/70; C25B 3/08

ABSTRACTED-PUB-NO: DE 2725211A

## BASIC-ABSTRACT:

Prodn. of perfluoroalkanesulphonyl fluorides (I) is carried out by electrolysis of a soln. of an alkanesulphonyl halide and/or a cyclic unsatd. sulphone in practically anhydrous HF.

The improvement comprises (a) using anodes whose surface has been mechanically roughened (pref. by sand blasting) and (b) using an electrolyte which has already been electrolysed with a quantity of electricity of >=1 Ah per cc of electrolyte and/or which has already produced 0.05 g of (I) per cc of electrolyte.

Cpds. (I) are useful as intermediates for preparing repellents ("phobiermi tteln") and surfactants. The improvement shortens the induction period for (I) prodn., which increases yields, improves current efficiency and reduces the risk of explosions during start-up, and allows used electrolyte to be recycled, which reduces material losses and avoids pollution problems.

TITLE-TERMS: PER FLUOROALKANE SULPHONYL FLUORIDE PREPARATION ELECTROLYTIC ALKANE SULPHONYL HALIDE SULPHONE HYDROGEN FLUORIDE

DERWENT-CLASS: E16 J03

CPI-CODES: E10-A09B1; J03-B; J03-B01;

## CHEMICAL-CODES:

Chemical Indexing M3 \*01\*

Fragmentation Code

K0 H6 M313 M314 M315 M316 M332 M334 M321 M320

3 ANSWER 389 OF 389 CAPLUS COPYRIGHT 2002 ACS  
ACCESSION NUMBER: 1979:84603 CAPLUS  
DOCUMENT NUMBER: 90:84603  
TITLE: **Perfluoroalkanesulfonic acid fluorides**  
INVENTOR(S): Wechsberg, Manfred  
PATENT ASSIGNEE(S): Bayer A.-G., Ger.  
SOURCE: Ger. Offen., 15 pp.  
CODEN: GWXXBX  
DOCUMENT TYPE: Patent  
LANGUAGE: German  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 2725211	A1	19781214	DE 1977-2725211	19770603
DE 2725211	C2	19810917		

$Q_c > 1000 \text{ Ah/kg}$

TI **Perfluoroalkanesulfonic acid fluorides**  
AB **Perfluoroalkanesulfonyl fluorides** were prep'd. by the electrolysis of an alkanesulfonyl halide or a cyclic unsatd. sulfone in practically anhyd. HF, using an anode with mech.-roughened surface and a current of .gtoeq.1 Ah/cm<sup>3</sup> electrolyte. Thus, butadiene sulfone was electrolyzed at 5 Ah/cm<sup>3</sup> in anhyd. HF at 8-10.degree. and 5-7 V to give 100% CF<sub>3</sub>(CF<sub>2</sub>)<sub>3</sub>SO<sub>2</sub>F.  $\text{P}_2\text{SO}_2$

ST **perfluoroalkanesulfonyl fluoride**; electrolysis alkanesulfonyl halide hydrofluoric acid; sulfone cyclic electrolysis hydrofluoric acid

IT Electrolysis  
(of alkanesulfonyl halides or cyclic unsatd. sulfones in anhyd. hydrofluoric acid, **perfluoroalkanesulfonyl fluorides** by)

IT **Perfluoro compounds**  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(**perfluoroalkanesulfonyl fluorides**, prep'n. of, by electrolysis of alkanesulfonyl halides or cyclic unsatd. sulfones in hydrogen fluoride)

IT **Sulfonyl halides**  
(alkane-, electrolysis of, in anhyd. hydrofluoric acid,  
**perfluoroalkanesulfonyl fluorides** by)

IT **Sulfones**  
RL: RCT (Reactant)  
(cyclic, unsatd., electrolysis of, in anhyd. hydrofluoric acid,  
**perfluoroalkanesulfonyl fluorides** by)

IT **Sulfonyl fluorides**  
(**perfluoroalkane-**, prep'n. of, by electrolysis of alkanesulfonyl halides or cyclic unsatd. sulfone in hydrogen fluoride)

IT 7664-39-3, biological studies  
RL: BIOL (Biological study)  
(electrolysis of alkanesulfonyl halides or cyclic unsatd. sulfones in anhyd., **perfluoroalkanesulfonyl fluorides** by)

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